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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,218	02/24/2004	Yunzhang Wang	5716	8819

7590  
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08/25/2006

EXAMINER
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VANATTA, AMY B

ART UNIT	PAPER NUMBER
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3765

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/785,218

Applicant(s)

WANG ET AL.

Examiner

Amy B. Vanatta

Art Unit

3765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) 1-33 and 41-70 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 34-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 07302004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-33, drawn to a woven substrate, classified in class 442, subclass 181.
  - II. Claims 34-40, drawn to a method of making a fiber-containing substrate and face-finishing the substrate, classified in class 26, subclass 29R.
  - III. Claims 41-68, drawn to a method of making a fiber-containing substrate and applying a chemical mixture, classified in class 8, subclass various.
  - IV. Claims 69-70, drawn to a method of making a composite textile substrate by joining various layers together, classified in class 156, subclass 60.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II, III, & IV and I are related as process of making and product made.

The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product can be made by another process, i.e. the product of Group I can be produced without a face finishing step.

3. Inventions II and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination

is separately usable. In the instant case, the subcombination of Invention II has separate utility such as for treating a fabric without applying any chemical mixtures thereto. See MPEP § 806.05(d).

4. Inventions II and IV are directed to related methods. The related inventions are distinct if the inventions as claimed do not overlap in scope, i.e., are mutually exclusive; the inventions as claimed are not obvious variants; and the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect. See MPEP § 806.05(j). In the instant case, methods of Inventions II and IV have different scopes and comprise materially different steps and effects.

5. Inventions III and IV are directed to related methods. The related inventions are distinct if the inventions as claimed do not overlap in scope, i.e., are mutually exclusive; the inventions as claimed are not obvious variants; and the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect. See MPEP § 806.05(j). In the instant case, methods of Inventions III and IV have different scopes and comprise materially different steps and effects.

6. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

7. During a telephone conversation between applicant's representative Brenda Wentz and Examiner Ula Ruddock on December 19, 2005, a provisional election was

made without traverse to prosecute the invention of Group II, claims 34-40. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-33 and 41-70 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 34-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 34 is indefinite in reciting the claimed method. The claim recites a method comprising steps of (a) providing a fiber containing substrate having a first surface and a second surface, and (b) face finishing the substrate. The relationship between the manipulative method steps (lines 11-14) and the substrate recited in lines 2-9 is unclear. It is unclear whether the substrate recited in part (a) of the method is the same substrate recited in lines 2-9. It is unclear whether the method steps of parts (a) and (b)

result in a substrate having the properties recited in claims 2-9; that is, it is unclear if or in what manner the limitations of lines 2-9 limit the claimed method. It is unclear whether the limitations of lines 2-9 are forming a part of the claimed method.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 34-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Otto (US 4,316,928).

Otto discloses a method of making a fiber containing substrate, including steps of providing a fiber containing substrate (10) having a first surface and a second surface (see Fig. 1), and face-finishing at least the first surface of the substrate. The face finishing is a mechanical treatment of the substrate, accomplished by exposing at least the first surface of the substrate to one or more abrasive surfaces (11,11a). The face-finishing forms integral microscopic surface structures, as in claim 1; see col. 3, lines 19-59, col. 6, lines 53-54 (disclosing that the finish is not apparent to the naked eye), and Figs. 9 and 17, showing 350x magnification of the surface. Regarding claim 38, Otto discloses that the abrasive surface is a roll coated with sandpaper. Regarding the recitation in claim 34 of the structure of the substrate (lines 2-9), such limitations are drawn to the product and do not further define the claimed method steps in any way.

Furthermore, the substrate of Otto does have integral microscopic surface structures including projections (see protrusions disclosed in col. 3, lines 22-25) and a plurality of unbroken fibers (see figures of Otto showing treated fabric of Otto), and the method of abrading disclosed by Otto would clearly result in the fabric having a Roughness Factor as claimed.

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otto (US 4,316,928) in view of Dischler (US 5,943,745).

Otto discloses a method as claimed, including face finishing a first surface of a substrate by exposing the surface to rollers (11,11a) coated with an abrasive substance. Otto discloses that the roller is covered with "a suitable abrasive material such as sandpaper, the grit size of which may vary depending upon the desired effect..." (col. 4, lines 52-54). Otto does not disclose the use of diamond grit having an average grit size of between about 600 and about 1200, as in claim 39. Diamond grit of this size is conventionally used for abrading textiles, however, such as taught by Dischler ('745). Dischler discloses a method of treating a textile substrate using an abrasive roller having a surface coated with diamond grit (col. 6, lines 30-31). The grit size is disclosed

as between 50 and 800, which range overlaps with that of claim 39 (col. 6, lines 30-32 and col. 7, lines 37-38). It is noted that applicant fails to disclose any criticality as to the type of abrasive particles used; that is, applicant's specification discloses that any of various types of abrasives may be used in the present invention. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use diamond grit rather than sandpaper as the abrasive coating on the abrasive roller of Otto, since diamond grit is conventionally used to abrade textiles, as disclosed by Dischler, and in the absence of the disclosure of any criticality as to the type of abrasive used, it is within the general skill of a worker in the art to select a known material as the abrasive in the treatment method on the basis of its suitability for the intended use as a matter of obvious design choice. Furthermore, it would have been obvious to use a diamond grit in the method of Otto having a size within the claimed range, since diamond grit having a size similar to the claimed range is conventional in the art, as taught by Dischler, and since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claim 40, the one or more abrasive surfaces disclosed by Otto are cylindrical rolls (see 11,11a).

#### ***Information Disclosure Statement***

14. The information disclosure statement filed 7/30/04 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most



knowledgeable about the content of the information, of each patent listed that is not in the English language. Specifically, see references AW and AX. It has been placed in the application file, but these two foreign documents have not been considered.

### ***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy B. Vanatta whose telephone number is 571-272-4995. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Welch can be reached on 571-272-4996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Amy B Vanatta  
Primary Examiner  
Art Unit 3765